

TEXTURE ADDRESSING CIRCUIT AND METHOD

## ABSTRACT OF THE DISCLOSURE

dm.a17 A texture addressing circuit and method for calculating texture coordinates according to various texture addressing modes for texture maps having arbitrary sizes. Texture coordinates are calculated from input texture coordinate values the texture addressing circuit receives and that are located in one of a plurality of predefined input ranges. A texture coordinate value for each of the input coordinate ranges is calculated in accordance with the sign of the input coordinate values, and from the calculated texture coordinate values, an output texture coordinate is selected based on the sign of the input texture coordinate and the sign of the calculated texture coordinate values. The texture addressing circuit for calculating texture coordinates includes a plurality of coordinate calculation circuits providing coordinate output values to a selection circuit from which an output texture coordinate is selected, according to a selection signal provided by select logic. The selection signal is based on the sign of the input coordinate value and the signs of the coordinate output values.